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REPLY

We thank Auer et al. for their comments on our paper (1). Auer et al. would like to add atrial fibrillation (AF) after cardiac surgery to the list of cardiovascular disorders that are exacerbated by low serum potassium concentrations. Atrial fibrillation is a common and costly complication after cardiac surgery (2). It is significantly more common when serum potassium falls below 3.5 mmol/l, and avoidance of hypokalemia may reduce its incidence (3,4).

The stress of cardiothoracic surgery increases sympathetic tone, and this may predispose one to the development of AF. Interestingly, experimental evidence suggests that sympathetic activity reduces the arrhythmic threshold of hypokalemic dogs (5). This is unsurprising, given the data that link catecholamines with hypokalemia and the favorable effects of beta-blockade on the renin-angiotensin-aldosterone system (6,7).

Therefore, we agree that avoidance of perioperative hypokalemia in patients undergoing cardiothoracic surgery is likely to reduce the incidence of AF in this setting and avoid unnecessary morbidity and costs. A randomized controlled trial of targeted potassium repletion versus standard care is thus warranted.

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Aspirin "Allergy" and Resistance

In a recent article, Gum et al.(1) discussed aspirin resistance, and Eikelboom et al. (2) wrote an editorial comment regarding this topic. We have seen several patients who reported that they seemed to have "allergic" reactions to aspirin. These "allergic" reactions consisted primarily of asthma-type attacks. Careful study revealed that these patients are not "allergic" to aspirin in the classical way; inhibition of cyclo-oxygenases by 325 mg of aspirin shifts the arachidonic acid cascade to the lipo-oxygenase branch (Fig. 1). This results in the production of more leukotreine C_4, D_4, and E_4, which together are the "slow-reacting substance of anaphylaxis" and powerful bronchoconstrictors. These patients then refuse to take aspirin and claim that they are "resistant" to and have "allergies" to aspirin.

On the other hand, when patients are given only 81 mg of aspirin, cyclo-oxygenase production recovers rapidly, including prostaglandin i_2 synthesis, which is platelet-aggregation inhibitory and a vasodilator. Inhibition of the platelet-aggregation inducer thromboxane A_2 appears to persist for several hours. It is generally accepted that low-dose aspirin (81 mg one time daily) should be recom-